

Serial No. 10/031,424

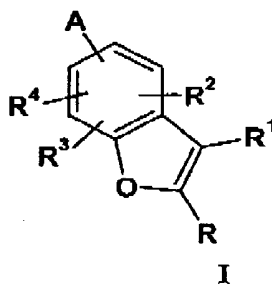
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and R, R¹, R², R³, R⁴, R⁵, R^{5'}, R⁶, R^{6'}, R⁷, R^{7'}, R⁸, and R^{8'} are as described in the specification.

Amendments to the Claims

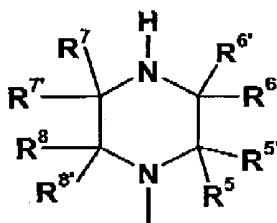
Please amend the Claims to cancel Claims 3 and 6 without prejudice and correct typographical errors as set forth below:

1. (Currently amended) The compounds of Formula I:



where:

A is a piperazine of formula:



R is hydrogen, halo, trifluoromethyl or C₁-C₆ alkyl;

R¹ is hydrogen, halo, trifluoromethyl, phenyl, or C₁-C₆ alkyl;

R², R³, and R⁴ are independently hydrogen, halo, dihalomethyl, trifluoromethyl, 1,1-difluoroethyl, cyano, C₁-C₄ alkoxy, C₁-C₄ alkoxycarbonyl, C₁-C₆ alkyl, C₁-C₆ alkyl,

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-C(O)NHR⁹, or C₁-C₆ alkyl substituted with a substituent selected from the group consisting of halo, C₁-C₄ alkoxy and hydroxy;

R⁵, R⁶, R⁷ and R⁸ are independently hydrogen, C₁-C₆ alkyl, phenyl, benzyl, hydroxymethyl, halomethyl, dihalomethyl, trihalomethyl, or benzyloxymethyl;

R^{5'} is hydrogen or methyl, provided that R^{5'} may be methyl only when R⁵ is other than hydrogen; or R⁵ and R^{5'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{6'} is hydrogen or methyl, provided that R^{6'} may be methyl only when R⁶ is other than hydrogen; or R⁶ and R^{6'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{7'} is hydrogen or methyl, provided that R^{7'} may be methyl only when R⁷ is other than hydrogen; or R⁷ and R^{7'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{8'} is hydrogen or methyl, provided that R^{8'} may be methyl only when R⁸ is other than hydrogen; or R⁸ and R^{8'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R⁹ is C₁-C₈ alkyl where the alkyl chain is optionally substituted with a substituent selected from the group consisting of phenyl and pyridyl;

or pharmaceutically acceptable acid addition salts thereof subject to the following provisos:

a) when R², R³, and R⁴ are all selected from the group consisting of hydrogen, trifluoromethyl, cyano, C₁-C₄ alkoxy, or C₁-C₄ alkyl, neither R⁶ nor R⁷ may be selected from the group consisting of hydrogen and C₁-C₆ alkyl unless:

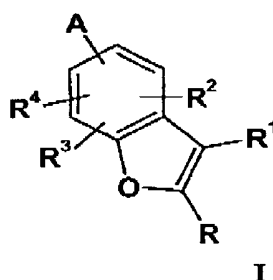
1. R is halo;
2. R¹ is halo or phenyl;
3. R^{6'} or R^{7'} is methyl; or
4. R⁵ or R⁸ are other than hydrogen;

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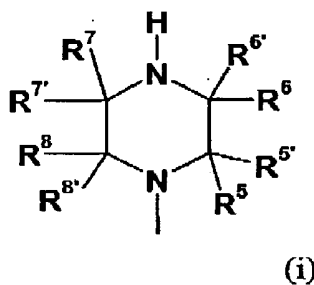
- b) when R, R¹, and two of R², R³, and R⁴ are hydrogen and one of R², R³, or R⁴ is selected from the group consisting of fluoro, chloro, bromo, methyl, or methoxy, at least one of R⁵, R⁶, R⁷, or R⁸ must be other than hydrogen;
- c) when R¹ is bromo or R is methyl, at least one of R², R³, and R⁴ must be other than hydrogen; and
- d) no more than two of R⁵, R⁶, R⁷, and R⁸ may be other than hydrogen.

2. (Currently amended) A pharmaceutical formulation which comprises, in association with a pharmaceutically acceptable carrier, diluent or excipient, a compound of Formula I:



where:

A is a piperazine of formula:



R is hydrogen, halo, trifluoromethyl or C₁-C₆ alkyl;

R¹ is hydrogen, halo, trifluoromethyl, phenyl, or C₁-C₆ alkyl;

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R², R³, and R⁴ are independently hydrogen, halo, dihalomethyl, trifluoromethyl, 1,1-difluoroethyl, cyano, C₁-C₄ alkoxy, C₁-C₄ alkoxycarbonyl, C₁-C₆ alkyl, C₁-C₆ alkyl, -C(O)NHR⁹, or C₁-C₆ alkyl substituted with a substituent selected from the group consisting of halo, C₁-C₄ alkoxy and hydroxy;

R⁵, R⁶, R⁷ and R⁸ are independently hydrogen, C₁-C₆ alkyl, phenyl, benzyl, hydroxymethyl, halomethyl, dihalomethyl, trihalomethyl, or benzyloxymethyl;

R^{5'} is hydrogen or methyl, provided that R^{5'} may be methyl only when R⁵ is other than hydrogen; or R⁵ and R^{5'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{6'} is hydrogen or methyl, provided that R^{6'} may be methyl only when R⁶ is other than hydrogen; or R⁶ and R^{6'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R⁷ is hydrogen or methyl, provided that R^{7'} may be methyl only when R⁷ is other than hydrogen; or R⁷ and R^{7'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{8'} is hydrogen or methyl, provided that R^{8'} may be methyl only when R⁸ is other than hydrogen; or R⁸ and R^{8'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R⁹ is C₁-C₈ alkyl where the alkyl chain is optionally substituted with a substituent selected from the group consisting of phenyl and pyridyl;

or pharmaceutically acceptable acid addition salts thereof subject to the following provisos:

a) when R², R³, and R⁴ are all selected from the group consisting of hydrogen, trifluoromethyl, cyano, C₁-C₄ alkoxy, or C₁-C₄ alkyl, neither R⁶ nor R⁷ may be selected from the group consisting of hydrogen and C₁-C₆ alkyl unless:

1. R is halo;
2. R¹ is halo or phenyl;
3. R^{6'} or R^{7'} is methyl; or
4. R⁵ or R⁸ are other than hydrogen;

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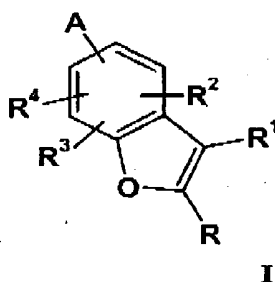
b) when R, R¹, and two of R², R³, and R⁴ are hydrogen and one of R², R³, or R⁴ is selected from the group consisting of fluoro, chloro, bromo, methyl, or methoxy, at least one of R⁵, R⁶, R⁷, or R⁸ must be other than hydrogen;

c) when R¹ is bromo or R is methyl, at least one of R², R³, and R⁴ must be other than hydrogen; and

d) no more than two of R⁵, R⁶, R⁷, and R⁸ may be other than hydrogen.

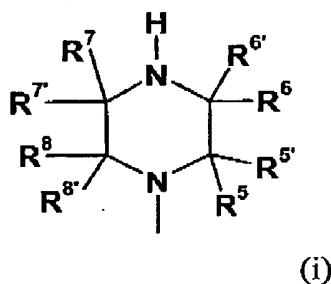
3. (Cancelled)

4. (Currently amended) A method for the treatment of obesity in mammals, comprising administering to a mammal in need of such activation a pharmaceutically effective amount of a compound of Formula I:



where:

A is a piperazine of formula:



R is hydrogen, halo, trifluoromethyl or C₁-C₆ alkyl;

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R^1 is hydrogen, halo, trifluoromethyl, phenyl, or C_1 - C_6 alkyl;

R^2 , R^3 , and R^4 are independently hydrogen, halo, dihalomethyl, trifluoromethyl, 1,1-difluoroethyl, cyano, C_1 - C_4 alkoxy, C_1 - C_4 alkoxycarbonyl, C_1 - C_6 alkyl, C_1 - C_6 alkyl, $-C(O)NHR^9$, or C_1 - C_6 alkyl substituted with a substituent selected from the group consisting of halo, C_1 - C_4 alkoxy and hydroxy;

R^5 , R^6 , R^7 and R^8 are independently hydrogen, C_1 - C_6 alkyl, phenyl, benzyl, hydroxymethyl, halomethyl, dihalomethyl, trihalomethyl, or benzyloxymethyl;

$R^{5'}$ is hydrogen or methyl, provided that $R^{5'}$ may be methyl only when R^5 is other than hydrogen; or R^5 and $R^{5'}$, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

$R^{6'}$ is hydrogen or methyl, provided that $R^{6'}$ may be methyl only when R^6 is other than hydrogen; or R^6 and $R^{6'}$, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

$R^{7'}$ is hydrogen or methyl, provided that $R^{7'}$ may be methyl only when R^7 is other than hydrogen; or R^7 and $R^{7'}$, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

$R^{8'}$ is hydrogen or methyl, provided that $R^{8'}$ may be methyl only when R^8 is other than hydrogen; or R^8 and $R^{8'}$, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^9 is C_1 - C_8 alkyl where the alkyl chain is optionally substituted with a substituent selected from the group consisting of phenyl and pyridyl;

or pharmaceutically acceptable acid addition salts thereof subject to the following provisos:

a) when R^2 , R^3 , and R^4 are all selected from the group consisting of hydrogen, trifluoromethyl, cyano, C_1 - C_4 alkoxy, or C_1 - C_4 alkyl, neither R^6 nor R^7 may be selected from the group consisting of hydrogen and C_1 - C_6 alkyl unless:

1. R is halo;
2. R^1 is halo or phenyl;
3. $R^{6'}$ or $R^{7'}$ is methyl; or

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4. R^5 or R^8 are other than hydrogen;
 - b) when R , R^1 , and two of R^2 , R^3 , and R^4 are hydrogen and one of R^2 , R^3 , or R^4 is selected from the group consisting of fluoro, chloro, bromo, methyl, or methoxy, at least one of R^5 , R^6 , R^7 , or R^8 must be other than hydrogen;
 - c) when R^1 is bromo or R is methyl, at least one of R^2 , R^3 , and R^4 must be other than hydrogen; and
 - d) no more than two of R^5 , R^6 , R^7 , and R^8 may be other than hydrogen.
5. (Cancelled)
6. (Cancelled)
7. (Previously presented) The method of Claim 4 where the mammal is human.
8. (Cancelled)
9. (Previously presented) A method for the treatment of obsessive compulsive disorder in mammals, comprising administering to a mammal in need of such treatment an effective amount of a compound of Formula I of Claim 1, or a pharmaceutically acceptable acid addition salt thereof.
10. (Previously presented) The method of Claim 9 where the mammal is human.
11. (Previously presented) A compound of Claim 1 where A is attached at either the 4- or 7-position of the benzofuran nucleus.
12. (Previously presented) A compound of Claim 11 where A is attached at the 7-position of the benzofuran nucleus.

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13. (Previously presented) A compound according to Claim 12 where R^2 , R^3 , R^4 are selected from the group consisting of hydrogen, halo, difluoromethyl, or trifluoromethyl.

14. (Previously presented) A compound according to Claim 12 where one of R^5 , R^6 , R^7 , and R^8 is other than hydrogen and the substituent is in the S configuration, and $R^{5'}$, $R^{6'}$, $R^{7'}$, and $R^{8'}$ are each hydrogen.

15. (Previously presented) A compound according to Claim 12 where R^5 is other than hydrogen, $R^{5'}$ is methyl, and R^6 , $R^{6'}$, R^7 , $R^{7'}$, R^8 , and $R^{8'}$ are each hydrogen.

16. (Previously presented) A compound according to Claim 12 where R^5 and R^6 are each other than hydrogen and are in the cis configuration with regard to each other, and $R^{5'}$, $R^{6'}$, R^7 , $R^{7'}$, R^8 , and $R^{8'}$ are each hydrogen.

17. (Previously presented) A compound according to Claim 12 where R^5 and R^7 are each other than hydrogen, and $R^{5'}$, R^6 , $R^{6'}$, $R^{7'}$, R^8 , and $R^{8'}$ are each hydrogen.